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### REMARKS

#### **35 U.S.C. § 112 Rejection**

The Examiner rejected claim 4 under 35 U.S.C. § 112, second paragraph, as failing to comply with the written description requirement. In support of the rejection, the Examiner only stated that, "adding an additional layer . . . after removing the first optical probe" is not clearly recited in the specification.

It is respectfully submitted that the Examiner has not established a *prima facie* written description rejection because the Examiner did not set forth any evidence why an adequate written description was not set forth.

The *examiner has the initial burden*, after a thorough reading and evaluation of the content of the application, of presenting evidence or reasons why a person skilled in the art would not recognize that the written description of the invention provides support for the claims. There is a strong presumption that an adequate written description of the claimed invention is present in the specification as filed. MPEP § 2163 Part II. (METHODOLOGY FOR DETERMINING ADEQUACY OF WRITTEN DESCRIPTION) (Emphasis added).

The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. MPEP § 2163 Part III

Thus, since the Examiner's rejection did not set forth any evidence or reasons why an adequate written description was not set forth, the Applicant is entitled to the strong presumption that the written description is adequate, and the rejection should be withdrawn.

#### **35 U.S.C. § 103 Rejection**

##### ***Bendett et al. in view of Hunsperger et al.***

The Examiner rejected claims 1-4, 7-12 and 16-22 under 35 U.S.C. § 103(a) as being unpatentable over Bendett et al. US Patent No. (6,330,388) in view of Hunsperger et al. (4,773,063).

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Contrary to the Examiner's assertion, the patents to Bendett and Hunsperger do not teach a method of testing a planar lightwave circuit by "*coupling an optical probe having a side polished optical fiber*" to the planar lightwave circuit and "*testing an optical pathway in the planar lightwave circuit*" by "*transmitting or receiving light through the first optical probe*" as recited in the Applicant's claims. The Examiner is kindly reminded of the requirements for setting forth a *prima facie* case of obviousness:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. §§ 2142, 2143

Nowhere do Bendett or Hunsperger teach or suggest to modify or combine the two references to arrive at the Applicant's claimed invention. It should be noted that the Applicant's invention is directed to a method for testing a planar lightwave circuit by using an optical probe having a side polished optical fiber to perform the testing. Nowhere does the art teach or suggest such a combination of probe with side polished fiber for the purposes of testing. Furthermore, the cited references do not teach or suggest at least the following concepts recited in the Applicant's claims:

Claim 4 - "*adding an additional layer of upper cladding to the planar lightwave circuit after removing the first optical probe*"

Claim 14 - "*wherein testing the planar lightwave circuit is performed on a PLC die prior to permanently attaching optical fibers to the PLC die*"

Since the Examiner did not address where such teachings or suggestions exist in the art, the rejections of these claims should be withdrawn.

Contrary to the Examiner's assertion, Hunsperger does not disclose a "side polished optical fiber". Hunsperger only discloses a fiber polished at its "distal end". No mentioning of side polishing was set forth. In any event, Hunsperger does not provide

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any motivation or suggestion to use a polished fiber for "testing an optical pathway within the planar lightwave circuit" as recited in the Applicant's claims.

The Examiner took Official Notice that "utilizing an index-matching fluid between the fiber and the planar circuit for the purpose of higher coupling efficiency is old and well known in the art." However, even if the assertion is accepted as true, such as statement of knowledge on its own does not sufficiently suggest combining or modifying the references to arrive at the Applicant's claimed combination. In addition, the Applicant hereby traversed the Examiner's Official Notice, and kindly calls upon the Examiner to either provide a reference to support the assertion, or to set forth facts supporting the assertion in an Examiner's affidavit, or to otherwise withdraw the rejection. MPEP 2144.03; 37 CFR 1.104(d)(2)

Regarding claim 4, even if the Examiner's assertion that "it is clear that an air layer can be considered as an upper cladding layer", such a statement is insufficient to set forth a *prima facie* case of obviousness of the Applicant's claims as the statement does not provide any teaching or suggestion to modify or combine the Hunsperger and Bendett references to arrive at the Applicant's claimed invention, nor does the statement provide and reasonable expectation of success. In addition, it appears that the Examiner may be mistaken with respect to claim 4, as there is no recitation of a limitation of any "air layer", so the Examiner's statement is insufficient to support a *prima facie* obviousness rejection.

Regarding claim 7, the Applicant hereby traverses the statement that "it would have been obvious to the ordinary skilled person in the art at the time the invention was made to test the first few results after the device is assembled for the purpose of the optimum efficiency of the device. First, such as statement does not point to any evidence that there existed a motivation or suggestion to modify the Bendett or the Hunsperger references to arrive at such a teaching which the Examiner admits is lacking in those references. Second, the Examiner has provided no source for the statement. Since the Examiner admits that neither Bendett nor Hunsperger provides such a teaching, the Examiner could not have used such references to arrive at such a conclusion. Thus, it appears that the Examiner has derived the statement from the Applicant's disclosure, which is impermissible. The Applicant hereby traverses the statement and calls upon the

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Examiner to provide either a reference or an Examiner's affidavit supporting the statement, or to otherwise withdraw the rejection. MPEP 2144.03; 37 CFR 1.104(d)(2)

Regarding the method claims, the Applicant hereby traverses the statement that "the method claims are inherently disclose by the Bendett et al and Hunsperger et al's reference". Even if this statement by the Examiner is accepted as true, such a statement is insufficient to set forth a *prima facie* case of obviousness of the Applicant's claims as the statement does not provide any teaching or suggestion to modify or combine the Hunsperger and Bendett references to arrive at the Applicant's claimed invention, nor does the statement provide and reasonable expectation of success. MPEP §§ 2142, 2143

Regarding claims 10, 11, and 17, the Applicant hereby traverses the Examiner's statement that, "Examiner notes that when the optical probes are manually or mechanically coupled to the waveguide, some degree of freedom is always provided for the purpose of the best result of the combined device." Such a statement does not appear to be a rejection of the claims based upon an application of either the Bendett or Hunsperger references to the Applicant's claims. Furthermore, the Applicant hereby traverses the statement and hereby respectfully calls upon the Examiner to either cite a reference that supports the statement or to set forth facts supporting the statement in an Examiner's affidavit, or to otherwise withdraw the rejection. MPEP 2144.03; 37 CFR 1.104(d)(2)

***Bendett et al and Hunsperger et al. and further in view of Jewell et al.***

The Examiner rejected claims 5, 6, 13, 14 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Bendett et al. (6,330,388) and Hunsperger et al. (4,773,063) as applied to claim 1 above, and further in view of Jewell et al. (6,542,672).

Contrary to the Examiner's assertion, Bendett and Hunsperger do not disclose every aspect of the claimed invention as discussed herein, above. Furthermore, even if Jewell does teach that testing may be conducted before optical wafers are diced, such a statement does not provide any teaching or suggestion to modify or combine the Bendett, Hunsperger, and Jewell references to arrive at the Applicant's claimed invention. MPEP §§ 2142, 2143, so the rejection should be withdrawn.

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**Conclusion**

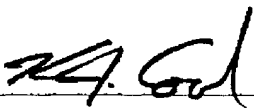
In light of the foregoing, reconsideration and allowance of the claims is hereby earnestly requested.

**Invitation for a Telephone Interview**

The Examiner is invited to call the undersigned attorney, Kenneth J. Cool, at (408) 850-1229 if there remains any issue with allowance.

Respectfully submitted,  
INTEL CORPORATION

Date: 12/29/03

  
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